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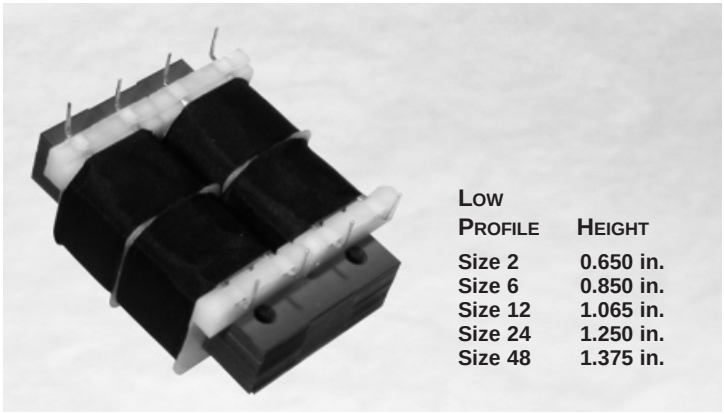
# Low Profile Humbucking Plug-in Transformers

***for limited-space PC board applications***



| Low Profile | Height |
|---|---|
| Size 2 | 0.650 in. |
| Size 6 | 0.850 in. |
| Size 12 | 1.065 in. |
| Size 24 | 1.250 in. |
| Size 48 | 1.375 in. |

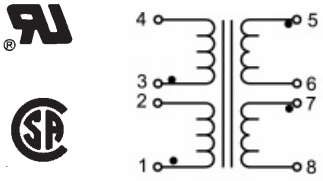
These low-profile plug-in power transformeres are wound in semi-toroidal humbucking configuration to minimize both EMI and unit height. They are designed for low-height critical pc board applications in semiconductor control and instrumentation and for use in single, dual, or reference dc supplies and isolated control circuits. Available in five sizes.

## FEATURES

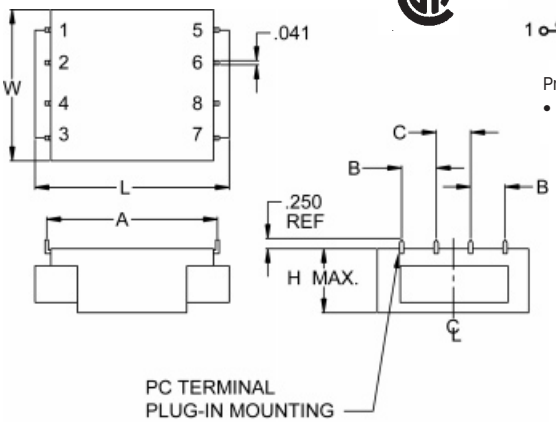
- Low height profile
- 1500V RMS HIPOT
- Vacuum impregnated -- withstands modern board washing systems and reduces audible noise for quiet operation
- Baked resin -- provides fully cured and environmentally resistant finish that will not peel or flake
- Sizes 2, 6, and 12 are available as encapsulated and hermetically sealed (request drawings).

## AGENCY APPROVALS

- UL, 506, File E73539
- UL 1446, File E80130
- CSA 22.2#66, File LR68051-2




Primaries 115/230V, 50/60 Hz
• Indicates like polarity



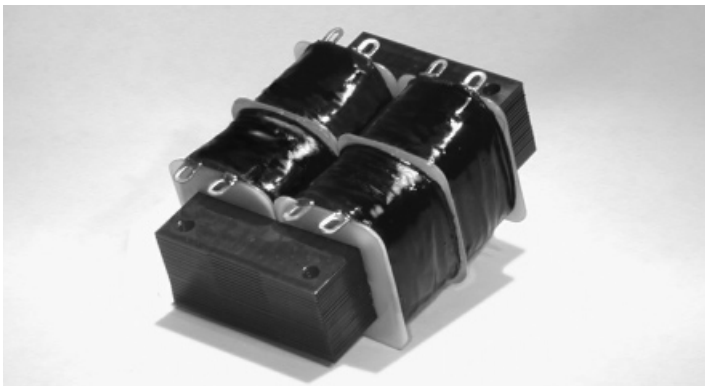

| Part Number | Size | Secondary RMS Rating | |
|---|---|---|---|
| | | Series | Parallel |
| LP 10-250B23 | 2 | 10V C.T. @ 250mA | 5V @ 500mA |
| LP 10-600B1 | 6 | 10V C.T. @ 600mA | 5V @ 1.20A |
| LP 10-1200B2 | 12 | 10V C.T. @ 1.20A | 5V @ 2.40A |
| LP 10-2400B89 | 24 | 10V C.T. @ 2.40A | 5V @ 4.80A |
| LP 10-4800B90 | 48 | 10V C.T. @ 4.80A | 5V @ 9.60A |
| LP 12-200B24 | 2 | 12.6V C.T. @ 200mA | 6.3V @ 400mA |
| LP 12-450B3 | 6 | 12.6V C.T. @ 450mA | 6.3V @ 900mA |
| LP 12-900B4 | 12 | 12.6V C.T. @ 900mA | 6.3V @ 1.80A |
| LP 12-1900B91 | 24 | 12.6V C.T. @ 1.90A | 6.3V @ 3.80A |
| LP 12-3800B92 | 48 | 12.6V C.T. @ 3.80A | 6.3V @ 7.60A |
| LP 16-150B25 | 2 | 16V C.T. @ 150mA | 8V @ 300mA |
| LP 16-350B5 | 6 | 16V C.T. @ 350mA | 8V @ 700mA |
| LP 16-700B6 | 12 | 16V C.T. @ 700mA | 8V @ 1.40A |
| LP 16-1500B93 | 24 | 16V C.T. @ 1.50A | 8V @ 3.00A |
| LP 16-3000B94 | 48 | 16V C.T. @ 3.00A | 8V @ 6.00A |
| LP 18-135B105 | 2 | 18V C.T. @ 135mA | 9V @ 270mA |
| LP 18-325B106 | 6 | 18V C.T. @ 325mA | 9V @ 650mA |
| LP 18-650B107 | 12 | 18V C.T. @ 650mA | 9V @ 1.30A |
| LP 18-1300B108 | 24 | 18V C.T. @ 1.30A | 9V @ 2.60A |
| LP 18-2600B109 | 48 | 18V C.T. @ 2.60A | 9V @ 5.20A |
| LP 20-125B26 | 2 | 20V C.T. @ 125mA | 10V @ 250mA |
| LP 20-300B7 | 6 | 20V C.T. @ 300mA | 10V @ 600mA |
| LP 20-600B8 | 12 | 20V C.T. @ 600mA | 10V @ 1.20A |
| LP 20-1200B95 | 24 | 20V C.T. @ 1.20A | 10V @ 2.40A |
| LP 20-2400B96 | 48 | 20V C.T. @ 2.40A | 10V @ 4.80A |
| LP 24-100B27 | 2 | 24V C.T. @ 100mA | 12V @ 200mA |
| LP 24-250B9 | 6 | 24V C.T. @ 250mA | 12V @ 500mA |
| LP 24-500B10 | 12 | 24V C.T. @ 500mA | 12V @ 1.00A |
| LP 24-1000B97 | 24 | 24V C.T. @ 1.00A | 12V @ 2.00A |
| LP 24-2000B98 | 48 | 24V C.T. @ 2.00A | 12V @ 4.00A |
| LP 28-90B115 | 2 | 28V C.T. @ 90mA | 14V @ 180mA |
| LP 28-215B116 | 6 | 28V C.T. @ 215mA | 14V @ 430mA |
| LP 28-430B117 | 12 | 28V C.T. @ 430mA | 14V @ 860mA |
| LP 28-850B118 | 24 | 28V C.T. @ 850mA | 14V @ 1.70A |
| LP 28-1700B119 | 48 | 28V C.T. @ 1.70A | 14V @ 3.40A |
| LP 30-85B125 | 2 | 30V C.T. @ 85mA | 15V @ 170mA |
| LP 30-200B126 | 6 | 30V C.T. @ 200mA | 15V @ 400mA |
| LP 30-400B127 | 12 | 30V C.T. @ 400mA | 15V @ 800mA |
| LP 30-800B128 | 24 | 30V C.T. @ 800mA | 15V @ 1.60A |
| LP 30-1600B129 | 48 | 30V C.T. @ 1.60A | 15V @ 3.20A |
| LP 34-75B28 | 2 | 34V C.T. @ 75mA | 17V @ 150mA |
| LP 34-170B11 | 6 | 34V C.T. @ 170mA | 17V @ 340mA |
| LP 34-340B12 | 12 | 34V C.T. @ 340mA | 17V @ 680mA |
| LP 34-700B99 | 24 | 34V C.T. @ 700mA | 17V @ 1.40A |
| LP 34-1400B100 | 48 | 34V C.T. @ 1.40A | 17V @ 2.80A |
| LP 40-60B29 | 2 | 40V C.T. @ 60mA | 20V @ 120mA |
| LP 40-150B13 | 6 | 40V C.T. @ 150mA | 20V @ 300mA |
| LP 40-300B14 | 12 | 40V C.T. @ 300mA | 20V @ 600mA |
| LP 40-600B101 | 24 | 40V C.T. @ 600mA | 20V @ 1.20A |
| LP 40-1200B102 | 48 | 40V C.T. @ 1.20A | 20V @ 2.40A |
| LP 56-45B30 | 2 | 56V C.T. @ 45mA | 28V @ 90mA |
| LP 56-100B15 | 6 | 56V C.T. @ 100mA | 28V @ 200mA |
| LP 56-200B16 | 12 | 56V C.T. @ 200mA | 28V @ 400mA |
| LP 56-425B103 | 24 | 56V C.T. @ 425mA | 28V @ 850mA |
| LP 56-850B104 | 48 | 56V C.T. @ 850mA | 28V @ 1.70A |
| LP 88-28B31 | 2 | 88V C.T. @ 28mA | 44V @ 56mA |
| LP 88-65B17 | 6 | 88V C.T. @ 65mA | 44V @ 130mA |
| LP 88-130B18 | 12 | 88V C.T. @ 130mA | 44V @ 260mA |
| LP 120-20B32 | 2 | 120V C.T. @ 20mA | 60V @ 40mA |
| LP 120-50B19 | 6 | 120V C.T. @ 50mA | 60V @ 100mA |
| LP 120-100B20 | 12 | 120V C.T. @ 100mA | 60V @ 200mA |
| LP 230-10B33 | 2 | 230V C.T. @ 10mA | 115V @ 20mA |
| LP 230-25B21 | 6 | 230V C.T. @ 25mA | 115V @ 50mA |
| LP 230-50B22 | 12 | 230V C.T. @ 50mA | 115V @ 100mA |

| Size | L | W | H | A | B | C | Oz. | Reg. (%) (Typ.) | T Rise ($^{O}$C) (Typ.) |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 1.875 | 1.562 | 0.650 | 1.600 | 0.375 | 0.375 | 5 | 20 | 25 |
| 6 | 1.875 | 1.562 | 0.850 | 1.600 | 0.375 | 0.375 | 7 | 18 | 30 |
| 12 | 2.500 | 2.000 | 1.065 | 2.000 | 0.500 | 0.375 | 11 | 15 | 30 |
| 24 | 2.875 | 2.250 | 1.250 | 1.900 | 0.600 | 0.530 | 15 | 15 | 48 |
| 48 | 3.125 | 2.500 | 1.375 | 2.180 | 0.600 | 0.660 | 21 | 12 | 65 |

Pulse Specialty Components reserves the right to make changes without notice.

# High-Power Low-Profile Humbucking Transformers

| PART NO. | Size | Secondary RMS Rating | |
|---|---|---|---|
| | | Series | Parallel |
| LP 10-2B34 | I | 10V C.T. @ 2.00A | 5V @ 4.00A |
| LP 10-5B35 | II | 10V C.T. @ 5.00A | 5V @ 10.0A |
| LP 10-7.5B36 | III | 10V C.T. @ 7.50A | 5V @ 15.0A |
| LP 10-13.5B37 | IV | 10V C.T. @ 13.5A | 5V @ 27.0A |
| LP 10-20B38 | V | 10V C.T. @ 20.0A | 5V @ 40.0A |
| LP 12-1.6B39 | I | 12.6V C.T. @ 1.60A | 6.3V @ 3.20A |
| LP 12-4B40 | II | 12.6V C.T. @ 4.00A | 6.3V @ 8.00A |
| LP 12-6B41 | III | 12.6V C.T. @ 6.00A | 6.3V @ 12.0A |
| LP 12-11B42 | IV | 12.6V C.T. @ 11.0A | 6.3V @ 22.0A |
| LP 12-16B43 | V | 12.6V C.T. @ 16.0A | 6.3V @ 32.0A |
| LP 16-1.25B44 | I | 16V C.T. @ 1.25A | 8V @ 2.50A |
| LP 16-3.15B45 | II | 16V C.T. @ 3.15A | 8V @ 6.30A |
| LP 16-4.75B46 | III | 16V C.T. @ 4.75A | 8V @ 9.50A |
| LP 16-8.5B47 | IV | 16V C.T. @ 8.50A | 8V @ 17.0A |
| LP 16-12.5B48 | V | 16V C.T. @ 12.5A | 8V @ 25.0A |
| LP 18-1.1B110 | I | 18V C.T. @ 1.10A | 9V @ 2.20A |
| LP 18-2.75B111 | II | 18V C.T. @ 2.75A | 9V @ 5.50A |
| LP 18-4.2B112 | III | 18V C.T. @ 4.20A | 9V @ 8.40A |
| LP 18-7.5B113 | IV | 18V C.T. @ 7.50A | 9V @ 15.0A |
| LP 18-11B114 | V | 18V C.T. @ 11.0A | 9V @ 22.0A |
| LP 20-1B49 | I | 20V C.T. @ 1.00A | 10V @ 2.00A |
| LP 20-2.5B50 | II | 20V C.T. @ 2.50A | 10V @ 5.00A |
| LP 20-3.75B51 | III | 20V C.T. @ 3.75A | 10V @ 7.50A |
| LP 20-6.75B52 | IV | 20V C.T. @ 6.75A | 10V @ 13.5A |
| LP 20-10B53 | V | 20V C.T. @ 10.0A | 10V @ 20.0A |
| LP 24-0.85B54 | I | 24V C.T. @ 0.85A | 12V @ 1.70A |
| LP 24-2.1B55 | II | 24V C.T. @ 2.10A | 12V @ 4.20A |
| LP 24-3.15B56 | III | 24V C.T. @ 3.15A | 12V @ 6.30A |
| LP 24-5.75B57 | IV | 24V C.T. @ 5.75A | 12V @ 11.5A |
| LP 24-8.5B58 | V | 24V C.T. @ 8.50A | 12V @ 17.0A |
| LP 28-0.7B120 | I | 28V C.T. @ 0.70A | 14V @ 1.40A |
| LP 28-1.75B121 | II | 28V C.T. @ 1.75A | 14V @ 3.50A |
| LP 28-2.7B122 | III | 28V C.T. @ 2.70A | 14V @ 5.40A |
| LP 28-4.8B123 | IV | 28V C.T. @ 4.80A | 14V @ 9.60A |
| LP 28-7B124 | V | 28V C.T. @ 7.00A | 14V @ 14.0A |
| LP 30-0.65B130 | I | 30V C.T. @ 0.65A | 15V @ 1.30A |
| LP 30-1.65B131 | II | 30V C.T. @ 1.65A | 15V @ 3.30A |
| LP 30-2.5B132 | III | 30V C.T. @ 2.50A | 15V @ 5.00A |
| LP 30-4.5B133 | IV | 30V C.T. @ 4.50A | 15V @ 9.00A |
| LP 30-6.65B134 | V | 30V C.T. @ 6.65A | 15V @ 13.3A |
| LP 34-0.6B59 | I | 34V C.T. @ 0.60A | 17V @ 1.20A |
| LP 34-1.5B60 | II | 34V C.T. @ 1.50A | 17V @ 3.00A |
| LP 34-2.25B61 | II | 34V C.T. @ 2.25A | 17V @ 4.50A |
| LP 34-4B62 | IV | 34V C.T. @ 4.00A | 17V @ 8.00A |
| LP 34-6B63 | V | 34V C.T. @ 6.00A | 17V @ 12.0A |
| LP 40-0.5B64 | I | 40V C.T. @ 0.50A | 20V @ 1.00A |
| LP 40-1.25B65 | II | 40V C.T. @ 1.25A | 20V @ 2.50A |
| LP 40-1.9B56 | III | 40V C.T. @ 1.90A | 20V @ 3.80A |
| LP 40-3.4B67 | IV | 40V C.T. @ 3.40A | 20V @ 6.80A |
| LP 40-5B68 | V | 40V C.T. @ 5.00A | 20V @ 10.0A |
| LP 56-0.35B69 | I | 56V C.T. @ 0.35A | 28V @ 0.70A |
| LP 56-0.9B70 | II | 56V C.T. @ 0.90A | 28V @ 1.80A |
| LP 56-1.35B71 | III | 56V C.T. @ 1.35A | 28V @ 2.70A |
| LP 56-2.4B72 | IV | 56V C.T. @ 2.40A | 28V @ 4.80A |
| LP 56-3.5B73 | V | 56V C.T. @ 3.50A | 28V @ 7.00A |
| LP 120-0.17B79 | I | 120V C.T. @ 170mA | 60V @ 340mA |
| LP 120-0.425B80 | II | 120V C.T. @ 425mA | 60V @ 850mA |
| LP 120-0.625B81 | III | 120V C.T. @ 625mA | 60V @ 1.25A |
| LP 120-1.1B82 | IV | 120V C.T. @ 1.10A | 60V @ 2.20A |
| LP 120-1.7B83 | V | 120V C.T. @ 1.70A | 60V @ 3.40A |
| LP 230-0.09B84 | I | 230V C.T. @ 90mA | 115V @ 180mA |
| LP 230-0.22B85 | II | 230V C.T. @ 220mA | 115V @ 440mA |
| LP 230-0.325B86 | III | 230V C.T. @ 325mA | 115V @ 650mA |
| LP 230-0.6B87 | IV | 230V C.T. @ 600mA | 115V @ 1.20A |
| LP 230-0.9B88 | V | 230V C.T. @ 900mA | 115V @ 1.80A |



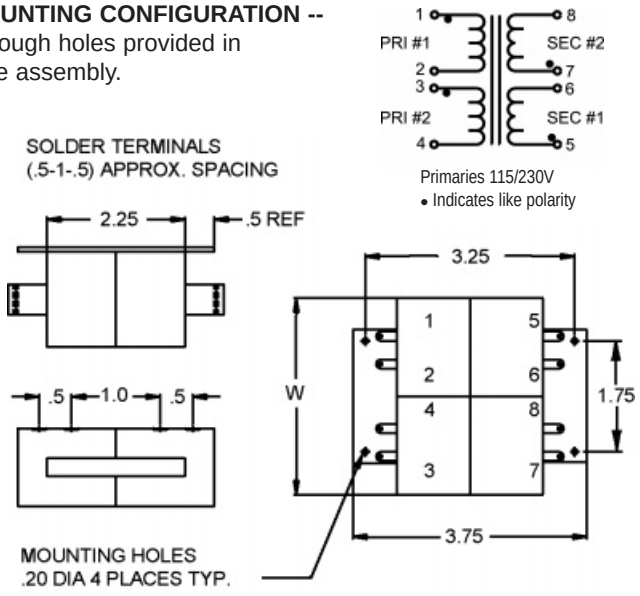
**20 to 200 VA. 1500V HIPOT. UL Class B. Chassis mount.**

## FEATURES

- UI design -- increases power/height ratio
- Side-by-side design -- lowers interwinding capacitance
- Semi toroidal construction -- reduces magnetic fields and EMI
- Greater surface area -- more uniform heat dissipation
- Solder lug terminals -- for rugged field applications
- UL recognized, 506, File E73539, Class B (130°)
- Available in five sizes
- 1500V HIPOT
- Baked resin -- provides fully cured and environmentally resistant finish that will not peel or flake

**NON-STANDARD RATINGS --** Tapped primaries, secondaries of different voltages, currents or frequencies can be furnished.

**MOUNTING CONFIGURATION --** Through holes provided in core assembly.




| Size | H (Max) | W (Max) | Wt. (lbs) (Approx) | VA (Nom) | Reg. (%) (Typ) | T. Rise (°C) (Typ) |
|---|---|---|---|---|---|---|
| I | .850 | 3.00 | 1.00 | 20 | 30 | 25 |
| II | 1.25 | 3.00 | 1.75 | 50 | 30 | 45 |
| III | 1.50 | 3.00 | 2.25 | 75 | 25 | 55 |
| IV | 1.85 | 3.00 | 3.00 | 135 | 20 | 65 |
| V | 2.35 | 3.00 | 4.25 | 200 | 15 | 90 |

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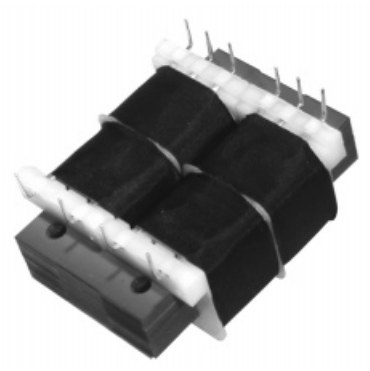
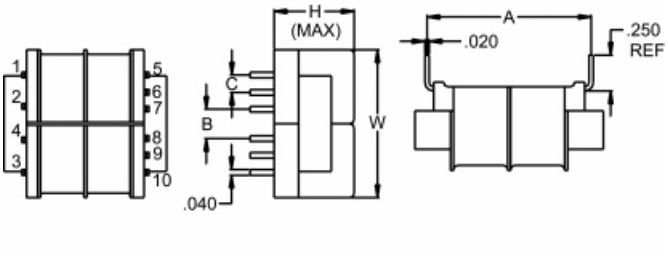
# Triple-output Low Profile Humbucking Transformers

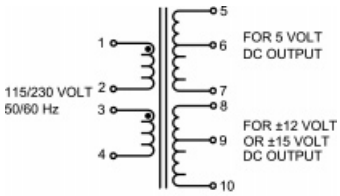


Designed around our Series LP transformers, MPL transformers are rated in terms of final DC output after regulation by a 3-terminal IC regulator. 1500V HIPOT is standard.

These transformers are designed for pc board power isolation and for applications that require triple-output regulated supplies for microprocessor applications.

- Primary 115/230 Volt, 50/60 Hz
- 5V and 12V or 15V outputs




| Size | VA | L | W | H | A | B | C | weight (lb) |
|---|---|---|---|---|---|---|---|---|
| 6 | 1.1 | 1.86 | 1.56 | .850 | 1.600 | 0.375 | 0.187 | 0.43 |
| 12 | 2.4 | 2.50 | 2.000 | 1.065 | 2.000 | 0.500 | 0.250 | 0.68 |

| Part Number Primary 50/60 Hz 115/230V | DC Output | | Size |
|---|---|---|---|
| | Output 1 | Output 2 | |
| MPL-6-12B51 | 5V @ 135 mA | 12V @ 40 mA | 6 |
| MPL-6-15B52 | 5V @ 135 mA | 15V @ 35 mA | 6 |
| MPL-12-12B61 | 5V @ 270 mA | 12V @ 85 mA | 12 |
| MPL-12-15B62 | 5V @ 270 mA | 15V @ 70 mA | 12 |

# WARRANTY

Pulse Specialty Components warrants for a period of 90 days from the date of shipment, that under normal use and service, its products will be free from defects in workmanship and material. Pulse Specialty Components' sole responsibility under this warranty is, at its option, to repair or replace, without charge, any defective product or part, or to credit buyer for the purchase price of such defective product, provided:

1) Buyer promptly notifies Pulse Specialty Components in writing within the warranty period, and

2) The defective product or part is returned to Pulse Specialty Components with transportation charges prepaid by Buyer, and

3) Pulse Specialty Components examination of such product shall disclose to its satisfaction that said defect exists and has not been caused by misuse, neglect, improper installation, repair or alteration, or accident.

EXCEPT FOR THE ABOVE WARRANTY AND THE IMPLIED WARRANTY OF TITLE, PULSE SPECIALTY COMPONENTS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. NO LIABILITY IS ASSUMED FOR EXPENDABLE ITEMS SUCH AS LAMPS AND FUSES. PULSE SPECIALTY COMPONENTS WILL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES UNDER ANY CIRCUMSTANCES**.**

Pulse
A TECHNITROL COMPANY

SPECIALTY
COMPONENTS

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